## TABLE 3

POINTS FOR HEAT CAPACITY CURVES OF PKODUCTS OF COMBUSTION
COMPUTATIONS MADE ON BASIS OF 100 VOLUMES OF GAS BURNED

Values of Heat Capacity per gram molecule from *Les Sources de L'Energie Calorifique* by Damour, Carnot and Rengade, based on the work of Mallard and Le Chatelier. Refer to Table 7.

HEAT CAPACITY OF PRODUCTS OF COMBUSTION. (Note Below)

| (1) Tempera-tures | (2) | (3) 400° | (4) 800° | (5) 1200° | (6) 1600° | (7) 2000° | (8) 2400° | (9) 2800° | |
|---|---|---|---|---|---|---|---|---|---|
| $N_2$+ | 51.42 | 427 | 881 | 1370 | 1,887 | 2,431 | 3,005 | 3,607 | |
| $C0_2$ | 15.74 | 63 | 143 | 245 | 364 | 501 | 657 | 832 | |
| $H_20$ | | 84 | 187 | 315 | 462 | 630 | 819 | 1,035 | 60% air |
| s | | 574 | 121 | 193 | 2,713 | 3,562 | 4,481 | 5474 | Curve |
| $N_2$ + | 164.56 | 464 | 958 | 1489 | 2,050 | 2,641 | 3,265 | 3,920 | |
| $C0_2$ | 26.12 | 104 | 237 | 406 | 603 | 832 | 1,091 | 1,380 | |
| $H_2O$ | | 94 | 209 | 351 | 516 | 703 | 915 | 1,156 | 80% air |
| ^ | | 662 | 140 | 224 | 3,169 | 4,176 | 5,271 | 6,456 | Curve |
| $N_2$ | 177.70 | 501 | 1034 | 1608 | 2,213 | 2,852 | 3,526 | 4,232 | |
| $CO_2$ | 36.50 | 140 | 331 | 568 | 843 | 1,162 | 1,524 | 1,929 | |
| $H_20$ | | 104 | 232 | 391 | 574 | 783 | 1,048 | 1,287 | 100% air |
| S A | | 751 | 159 | 256 | 3,730 | 4,797 | 6,098 | 7448 | Curve |
| 33=20% | 32.8 | 93 | 192 | 29S | 410 | 526 | 652 | 783 | 120% air |
| £/! | | 844 | 178 | 286 | 4,140 | 5,323 | 6,750 | 8,231 | Curve |
| C=40 | 65.7 | 185 | 383 | 595 | 819 | 1,055 | 1,304 | 1,565 | 140% air |
| SA-j-C = | | 936 | 217 | 346 | 4,549 | 5,852 | 7,402 | 9,013 | Curve |
| £> = | 131. | 371 | 765 | 118 | 1,637 | 2,109 | 2,607 | 3,130 | 180% air |
| 2A+I> | .... | 112 | 236 | 375 | 5,367 | 6,906 | 8,705 | 10,578 | Curve |
| $ = | *262.* | 742 | 153 | 237 | 3,274 | 4,218 | 5,214 | 6,160 | 260% air |
| SA-j-# | | 149 | 312 | 494 | 7,004 | 9,015 | 11,212 | 13,608 | Curve |
| -P = | 394. | 111 | 229 | 356 | 4,911 | 6,327 | 7,821 | | 340% air |
| SA-fF = | | 186 | 389 | 613 | 8,641 | 11,124 | 13,919 | | Curve |
| 0 = | 525. | 148 | 306 | 475 | 6,548 | 8,436 | ---- | | 420% air |
| SA+£ | | 223 | 465 | 722 | 10,278 | 13,233 | | | Curve |
| // = | 657 | 185 | 382 | 594 | 8,187 | | | | 500% air |
| *2A + H-* | | 260 | 542 | 851 | 11,917 | | | | Curve |

This computation has been carried out further than necessary in order to approximate
the limits in regard to combustion conditions, both with excess and deficient air supply.